IM 5 Dosage Calculation Practice Problems

1. Patient: A 20 kg child
   Prescribed Medication: Administer 300 mg of erythromycin by mouth every 6 hours for 10 days.
   Medication Reference:
   Recommended Dose: 15 to 20 mg/kg/day divided every 6 hours
   Concentration: 200 mg/5 mL
   How many milliliters will the nurse administer per dose?

2. The medication order is to administer a loading dose of digoxin (Lanoxin) 15 mcg/kg. The neonate weighs 4 pounds. Available: an ampule labeled Lanoxin 0.25 mg/mL. How many mL will you administer? (Round to the nearest tenth)

3. A 25 kg child is to receive cefotaxime, IVPB.
   Medication Reference
   Recommended Dose: Cefotaxime 50 to 180 mg/kg/24 hours in 4 or 6 equally divided doses.
   Which dose falls within the recommended range?

   A. 1250 mg every 6 hours
   B. 205 mg every 6 hours
   C. 300 mg every 4 hours
   D. 1125 mg every 4 hours

4. The nurse is to administer 100 ml IVPB over 1 hour using IV tubing drop factor of 30 gtt/mL. The tubing should be set at ___ drops per minute?

5. Patient: An 20-kg child
   Prescribed Medication: 8 ml of acetaminophen and codeine elixir, PO, for pain
   Concentration of elixir: 120 mg acetaminophen and 12 mg codeine per 5 mL
   The child will receive how many milligrams of codeine in the 8 milliliter dose?

6. A 50 kg child is to receive hydroxyurea, PO, every third day.
   Medication Reference:
   Recommended Dose: 80 mg/kg/every 3 days
   The nurse should calculate the dose as how many milligrams every 3 days?

7. The suggested dose of tobramycin is 4 mg/kg/day to be administered every 12 hours in equally divided doses. An infant weighing 1500 g should receive how many mg/dose?

8. Patient: 15 kg child
   Prescribed Medication: Acylovir, IV, 10 mg/kg every 8 hours
   The nurse should calculate the dose of acylovir to be how many milligrams every 8 hours?

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9. The recommended range for a medication is 200 to 400 mg/kg/day in 4 to 6 divided doses. The patient is 8 kg.
   Which of the following doses are within the recommended range?

   A. 1600 mg every 6 hours
   B. 600 mg every 4 hours
   C. 500 mg every 6 hours
   D. 800 mg every 4 hours

10. The nurse receives an order to administer 150 mL of normal saline over 2 hours. The nurse should administer the normal saline bolus at how many milliliters per hour via an IV pump?

11. The nurse is to administer 200 mg of acetaminophen elixir PO. The nurse has acetaminophen 120 mg/5 mL available. How many milliliters should the nurse draw up in the PO syringe? (round to the nearest tenth)

12. Medication order: 20 mg of a medication by mouth tid
    Patient weight: 132 pounds
    Recommended dose range: 1 to 3 mg/kg/day
    Is this a safe medication order?

13. A 15 kg child is to receive cefotaxime, IVPB
    Medication Reference:
    Recommended Dose: Cefotaxime 50 to 180 mg/kg/24 hours in 4 or 6 equally divided doses.
    Which dose falls within the recommended range?

    A. 100 mg every 6 hours.
    B. 2 gm every 6 hours.
    C. 190 mg every 4 hours.
    D. 750 mg every 4 hours.

14. The nurse is caring for a patient who has an order for 500 mg azithromycin IVPB once a day. An IVPB of 500 mg azithromycin mixed in 500 ml normal saline is in the patient's medication drawer.
    The IVPB is to be administered over 3 hours on an IV Pump. At what rate should the nurse administer the medication?

    A. 50 mL/hr
    B. 167 mL/hr
    C. 500 ml/hr
    D. 1500 mL/hr

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15. Medication order: 35 mg of a medication by mouth tid
    Patient weight: 99 pounds
    Safe dose range: 2 to 4 mg/kg/day
    Is this a safe medication order?